

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A data driver for driving data lines of an electro-optic device, comprising:

a state setting register that stores setting data for one of multiple states, the multiple states including a display ON state where drive power is generated and display operation is conducted using drive signals based on display data, a display OFF state where the drive power is generated but display operation using the drive signals is not conducted, and a sleep state where the drive power is not generated and display operation using the drive signals is not conducted;

a state setting circuit that outputs drive control signals based on the multiple states, ~~where the state setting circuit controls~~ controlling transition to any of the multiple states in accordance with the setting data stored in the state setting register; and

a drive circuit that drives the data lines with the drive power based on the drive control signals,

~~wherein~~ the state setting circuit ~~controls~~ controlling transition from the sleep state to the display OFF state when ~~[[a]] first setting data~~ of the setting data is received by the state setting register during the sleep state, and

~~wherein~~ the state setting circuit ~~controls~~ controlling transition from the sleep state to the display OFF state and then ~~controls~~ controlling transition from the display OFF state to the display ON state when ~~[[a]]~~ second setting data of the setting data is received by the state setting register and the first setting data is then received by the state setting register during the sleep state.

2. (Currently Amended) The data driver according to claim 1, further comprising:

a counter that counts frame pulses having a scan cycle of scan lines of the electro-optic device,

~~wherein~~ the state setting circuit ~~controls~~ controlling transition from the display OFF state to the display ON state when a count value of the counter reaches a predetermined value, and ~~wherein~~ the counter ~~starts counting~~ starting to count after the state setting circuit controls transition from the sleep state to the display OFF state based on the second setting data followed by the first setting data being received by the state setting register during the sleep state.

3. (Currently Amended) The data driver according to claim 2, ~~wherein~~ the predetermined number is being a product of f and Y , ~~wherein~~

f is being a frequency in Hertz of the frame pulses, and

Y is being a period in milliseconds for a power circuit for generating the drive power to stabilize after starting up, or for an oscillating circuit that outputs a clock for generating the frame pulses to stabilize after starting oscillation operation.

4. (Currently Amended) A data driver for driving data lines of an electro-optic device, comprising:

a state setting register that stores setting data for one of multiple states, the multiple states including a display ON state where drive power is generated and display operation is conducted using drive signals based on display data, a display OFF state where the drive power is generated but display operation using the drive signals is not conducted, and a sleep state where the drive power is not generated and display operation using the drive signals is not conducted;

a state setting circuit that outputs drive control signals based on the multiple states, ~~wherein~~ the state setting circuit ~~controls~~ controlling transition to any of the multiple states in accordance with the setting data stored in the state setting register; and

a drive circuit that drives the data lines with the drive power based on the drive control signals,

~~wherein~~ the state setting circuit ~~controls~~ controlling transition from the sleep state to the display OFF state when ~~[[a]]~~ first setting data of the setting data is received by the state setting register during the sleep state, and the state setting circuit ~~controls~~ controlling transition from the sleep state to the display OFF state and then ~~controls~~ controlling transition from the display OFF state to the display ON state when ~~[[a]]~~ third setting data of the setting data is received by the state setting register during the sleep state.

5. (Currently Amended) The data driver according to claim 4,

~~wherein~~ the state setting circuit ~~controls~~ controlling transition from the display OFF state to the sleep state when ~~[[a]]~~ fourth setting data of the setting data is received by the state setting register during the display OFF state, and the state setting circuit ~~controls~~ controlling transition from the display ON state to the display OFF state and then ~~controls~~ controlling transition from the display OFF state to the sleep state when the fourth setting data is received by the state setting register during the display ON state.

6. (Currently Amended) A data driver for driving data lines of an electro-optic device, comprising:

a state setting register that stores setting data for one of multiple states, the multiple states including a display ON state where drive power is generated and display operation is conducted using drive signals based on display data, a display OFF state where the drive power is generated but display operation using the drive signals is not conducted, and a sleep state where the drive power is not generated and display operation using the drive signals is not conducted;

a state setting circuit that outputs a drive control signal based on the multiple states, ~~wherein~~ the state setting circuit ~~controls~~ controlling transition of the multiple states in accordance with the setting data stored in the state setting register; and

a drive circuit that drives the data lines with the drive power based on the drive control signals,

wherein the state setting circuit ~~controls~~ controlling transition from the display OFF state to the sleep state when ~~[[a]]~~ fourth setting data of the setting data is received by the state setting register during the display OFF state, and the state setting circuit ~~controls~~ controlling transition from the display ON state to the display OFF state and then ~~controls~~ controlling transition from the display OFF state to the sleep state when the fourth setting data is received by the state setting register during the display ON state.

7. (Previously Presented) An electro-optic device, comprising:
 - a plurality of scan lines;
 - a plurality of data lines;
 - a plurality of pixels that are coupled to the plurality of scan lines and the plurality of data lines;
 - a scan driver for scanning the plurality of scan lines; and
 - the data driver according to claim 1 for driving the plurality of data lines.
8. (Previously Presented) An electro-optic device, comprising:
 - a display panel that includes a plurality of scan lines, a plurality of data lines, and a plurality of pixels coupled to the plurality of scan lines and the plurality of data lines;
 - a scan driver for scanning the plurality of scan lines; and
 - the data driver according to claim 1 for driving the plurality of data lines.

9. (Currently Amended) The data driver according to claim 1,

~~wherein~~ the state setting circuit ~~controls~~ controlling transition from the display OFF state to the sleep state when ~~[[a]]~~ fourth setting data of the setting data is received by the state setting register during the display OFF state, and the state setting circuit ~~controls~~ controlling transition from the display ON state to the display OFF state and then ~~controls~~ controlling transition from the display OFF state to the sleep state when the fourth setting data is received by the state setting register during the display ON state.